TECHNIQUE FOR EFFECTIVE ORGANIZATION AND COMMUNICATION OF INFORMATION

This application claims the benefits under 35 U.S.C. 119(e) of U.S. Provisional Application No. 60/221,628 filed on Jul. 28, 2000; U.S. Provisional Application No. 60/224,448 filed on Aug. 10, 2000; and U.S. Provisional Application No. 60/226,825 filed on Aug. 22, 2000.

FIELD OF THE INVENTION

The invention relates to a communication system and method, and more particularly to a system and method for providing communication services to a user through a server.

BACKGROUND OF THE INVENTION

Mobile devices such as personal communication systems (PCS) and personal digital assistants (PDA) have been developed to provide access to the Internet and other network-type services. These devices incorporate wireless communications and modem facilities, enabling a user to send and receive electronic mail (e-mail), or to upload and download data through the Internet. Similarly, wireless telephones have been adapted to receive and display textual messages.

However, users of the mobile devices have ever-increasing demand for Internet access through a wireless communication network. In response, more and more wireless communication bandwidth is allocated to such devices to access multimedia (text, audio and/or video) data from the Internet. As wireless communication bandwidth and data transfer rates increase, the increase in the volume of data available to a mobile device quickly overwhelms the capacity of the mobile device. At the same time, this flood of data also overwhelms a user as the user tries to effectively utilize the data collected by the mobile device. Without proper organization and presentation of the collected data, useful and important data often goes unnoticed.

In addition, a user may use multiple mobile devices to conduct daily life. Typically, each mobile device has its own database. It is often desirable that data collected in one database be replicated in other databases especially when the collected data is useful and important to the user. However, due to the incompatibility of the traditional mobile devices, the data replication may only be accomplished by data reentry or re-visiting of information sources. Disadvantageously, the data re-entry is oftentimes labor intensive, and the re-visits are time consuming. Moreover, the user may not be able to recall the previous information sources from which the data was collected, and even if the user is able to re-visit each of those information sources, the data there may have been revised because of the time lag, thus frustrating the data replication effort.

SUMMARY OF THE INVENTION

In accordance with the invention, a centralized communication facility, e.g., a server connected to one or more communication networks, is employed to collect and organize information for a user of a mobile device. For each user, the server collects and organizes the information based on user profiles that reflect different user personae. By collecting and organizing information according to the user profiles in the server, the operation of the mobile device is simplified. In addition, the amount of non-volatile memory required in the mobile device may be reduced, as most of the information is stored in the server, instead. The mobile device obtains the necessary information from the server on an as needed basis.

In addition, the server provides different protocol driver programs for various mobile devices for communications with the server. This being so, the various incompatible mobile devices may share the same information by efficiently downloading it from the server, thereby obviating the need of data re-entry or re-visits of information sources as in prior art. Specifically, during an initial handshake with the server, the mobile device identifies itself to the server, which then downloads the appropriate protocol driver program to the mobile device for its communications with the server.

In an illustrative embodiment, the aforementioned user profiles include, e.g., a personal profile and a business profile. A personal profile reflects the user's personal persona, which includes personal information such as medical and financial records. A business profile reflects a user's business persona, which includes the user's business related information such as the names of contacts with whom the user does business. A user may also establish alternative profiles that reflect other user personae, e.g., vacation or travel profiles. These alternative profiles may include information that reflects a user's vacation or travel preferences, e.g., names and addresses of hotels, restaurants, airlines or airline schedules. This information may also be categorized by location, or by type of entertainment, e.g., theaters, cinemas, etc.

In accordance with another aspect of the invention, the server may obtain, e.g., by searching a network of libraries, information items concerning the location of, and directions to, selected businesses or services. The information items may be presented in textual and/or graphic format. The graphic format may include indications of the locations of the selected businesses or services on navigation maps, which are downloaded for display onto the mobile device. The displayed business or service information items may be selected based on a user profile. Thus, the information items may include the names and locations of restaurants, gas stations, places of interest, scenic viewing areas, etc.

In accordance with yet another aspect of the invention, the server may be used to organize incoming messages to the user based on the source of the messages and user criteria preestablished in the user profiles. For example, the server may selectively perform message storage or call forwarding when the user is not available. In a message storage mode, messages may be identified by their source and stored according to the user specified criteria. The server may then provide different notifications to the user depending upon the source of the messages. In a call forwarding mode, calls originating from a party designated in a personal profile may be directed to a personal message storage area.

In accordance with still yet another aspect of the invention, electronic information cards, referred to as "E-cards," may be used to organize data in the mobile device and to exchange selected data between the server and the mobile device. E-cards may contain information from selected user profiles. For example, a personal E-card may contain information items related to financial records, such as credit card numbers, bank accounts and balances from the user personal profile. A business E-card may contain information items from the user business profile which are related to business. With the E-card arrangement, selective user information can be distributed among different recipients in an efficient manner.

BRIEF DESCRIPTION OF THE DRAWINGS

Further aspects, features and advantages of the invention will become apparent from the following detailed description